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10/521,480	01/18/2005	Peterjan Van Nieuwenhuizen	36-1882	6986

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EXAMINER
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ELPENORD, CANDAL

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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10/09/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/521,480

## Applicant(s)

VAN NIEUWENHUIZEN,  
PETERJAN

## Examiner

Candal Elpenord

## Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-12, 14, 16, 18 and 20 is/are rejected.
- 7) ☐ Claim(s) 6, 13, 15, 17 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 18 January 2005.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because all the blocks in Fig. 1 should be labeled with descriptive legends. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the

amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claim 20** is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

**Regarding claim 20**, the limitation "a program storage device" recited in line 1 is not a process, machine, manufacturer, or composition of matter, or any new and useful improvement thereof because there is no physical structure/connection of the computer software recited in the claim. To overcome this rejection, it is suggested to applicant to change "computer program product" to --computer readable medium encoded with computer executable instructions--.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claim 8** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Regarding claim 8**, the occurrence of the phrase "the parameter xi" recited in line 1 has no antecedent basis.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. **Claims 1-5, 7, 9-12, 14, 16, 18 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Litwin et al (US 2003/0145098) in view of Loguinov et al (US 7,206,285 B2).

**Regarding claims 1-5, 7-12, 14-16, 18 and 20, regarding claim 1**, Litwin et al. discloses a method of controlling the rate of data transmission from a source of data to a user via a communications link, wherein processing means are provided to generate a signal representing a rate request which will be used in determining the rate at which data will be transmitted from the source to the user, the processing means generating

the signal by carrying out the steps of: (a) obtaining ("**detection of congestion level**" recited in **paragraph 0008 line 7-10**) an indication of the amount of congestion on the communications link (**Fig. 2, "link between network controller 220 and network device 230c**, recited in **paragraph 0030, lines 1-6**) , selecting a value indicative of the user's willingness to pay ("**second selection for cost specification**" recited in **paragraph 0010, lines, 9-11**) given transmission data rate ("**user's transmission content**" recited in **paragraph 0010, lines 7-9**) and the user's willingness to pay weighted by a variable parameter ("**varying const**" recited in **paragraph 0017 line 1-9**), the processing means signal (**Fig. 3A, device 317-"provide level of congestion and cost of service to user (audibly and /or visually"** recited in **paragraph 0036 line 1-11**) thereafter communicating the signal to the source of data, **regarding claim 3**, discloses a method, wherein the value of the variable parameter varies continuously ("**cost of service threshold increment**" recited in **paragraph 0039 line 1-9**), **regarding claim 4**, a method, wherein the indication of congestion is the product ("**cost of service being proportional to congestion level**" recited in **paragraph 0029, lines 9-12**) of a congestion charge (**Fig. 3A, step 310-"cost of service relative to congestion**" recited in **paragraph 0034 line1-3 and paragraph 0008, lines 1-7**), **regarding claim 5**, a method, wherein the value of the variable parameter varies (**Fig. 3A, step 330 "cost comparison in relation to congestion"** recited in **paragraph 0043, lines 1-5**) in accordance with the difference between the user's willingness to pay and the indication of the amount of congestion ("**calculation of cost of service**" recited in **paragraph 0010, lines 5-6**), **regarding claims 7 and 14**, a

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method, wherein if the difference (**"cost of service rises above threshold"** recited in **paragraph 0046, lines 4-10**) between the indication of the amount of congestion and the user's willingness to pay (**"cost of service below user threshold"**, recited in **paragraph 0044, lines 1-5**), regarding claim 10, the processing means (**"detection of congestion level"** recited in **paragraph 0008 line 7-10**) including means (**Fig. 3A, "determining congestion level 305"**, recited in **abstract, lines 2-3**) for obtaining an indication of the amount of congestion on the communications link (**Fig. 2, "communication network 210"**, recited in **paragraph 0029, lines 12-13**), selecting means (**"second selection for cost specification"** recited in **paragraph 0010, lines 9-11**) for selecting a value indicative of the user's willingness to pay for a given transmission data rate (**"specifying downloaded content"**, recited in **paragraph 0010, lines 7-9**), and the USER'S willingness (**Fig. 3A, "selection of cost service threshold by user step 325"**, recited in **abstract, lines 8-10**) to pay weighted by a variable parameter (**"varying const"** recited in **paragraph 0017 line 1-9**), the processing means (**Fig. 3A, device 317-"provide level of congestion and cost of service to user (audibly and /or visually"** recited in **paragraph 0036 line 1-11**) further including means for communicating the signal to the source, regarding claim 11, a rate controller (**Fig. 2, "Network controller 220"**, recited in **paragraph 0029, lines 1-9**) wherein the determining means (**Fig. 3B, step 340 "cost of service and threshold"** recited in **paragraph 0046, lines 1-10**) is adapted to, determine the difference between the user's willingness to pay and the indication of the amount of congestion, and vary the value of the variable parameter (**"varying the rates charged"**

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recited in **paragraph 0017, lines 4-9)** in accordance with the difference, **regarding claim 16**, a method of obtaining an indication of the amount of congestion on the communications link ("**congestion level**", recited in **paragraph 0010, lines 3-5)**, selecting a value indicative of the user's willingness to pay for a given transmission data rate ("**user second selection**", recited in **paragraph 0010, lines 9-11)**, **regarding claim 18**, the processing means including means ("**determining congestion level**", recited in **paragraph 0010, lines 3-5)** for obtaining an indication of the amount of congestion on the communications link (**Fig. 2, "link between network controller 220 and network device 230c**, recited in **paragraph 0030, lines 1-6)**, selecting means ("**user second selection-cost of service**", recited in paragraph 0010, lines, 9-11) recited for selecting a value indicative of the USER'S willingness to pay for a given transmission data rate ("**first selection specifying content to be downloaded**", recited in **paragraph 0010, lines 7-9)**, **regarding claim 20**, Litwin discloses a program storage device (**Fig.1, "storage device 118"** recited in **paragraph 0022 line 2-5)** readable by a processing apparatus ( **Fig. 1, "processor 102"** recited in **paragraph 0022 line 3-9)**, the device embodying a program of instructions executable by the processor to perform the steps (**see paragraph 0020 line 1-21)** of obtaining an indication of the amount of congestion on the communications link, and selecting a value indicative of the user's willingness to pay for a given transmission rate as recite above in **claim1**.

**Litwin et al.** teaches all the subject matter of the claimed invention with the exception of disclosing the following features, **regarding claim 1**, determining the rate



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to be requested as a function of indication of the amount of congestion, wherein the rate of the data transmission from the source to the user is controlled on the basis of the signal, **regarding claim 4**, a previously determined data rate, **regarding claim 7**, a method, wherein if the difference between the indication of the amount of congestion and the user's willingness to pay falls within a predetermined range a first data rate is requested, and if the difference between the indication of the amount of congestion and the user's willingness to pay falls outside the predetermined range a second different data rate is requested, **regarding claim 10**, rate controller for controlling the rate of data transmission from a source to a user via a communications link, the rate controller including processing means for generating a signal representing a rate request which will be used in determining the rate at which data will be transmitted from the source to the user, **regarding claim 12**, a rate controller, wherein the determining means determines a first rate to be requested if the difference between the indication of the amount of congestion and the selected value falls within a predetermined range, and a second different data rate to be requested if the difference between the indication of the amount of congestion and the value falls outside the predetermined range, **regarding claim 16**, determining the rate to be requested on the basis of the ratio of the value to the indication of the amount of congestion on the communications link, **regarding claim 18**, determining means for determining the rate to be requested on the indication of the amount of congestion on the communications link, wherein the rate of the data transmission from the source to the user is controlled on the basis of the signal.

However, **Loguinov et al.** in a similar field of endeavor, **regarding claim 1**, discloses a

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method for determining the rate to be requested as function of the indication of the amount of congestion (**Fig.3, congestion Feedback controller-“rate adjustment with depending on congestion”** recited in **column 2 line 50-56**), wherein the rate (“**congestion controller**”, recited in **column, lines 20-25**), of the data transmission from the source to the user is controlled on the basis of the signal (**Fig. 2, “congestion Feedback arrow”** recited in **column 4, lines 3-6**), regarding claim 4, and a previously determined data transmission rate (“**maximum data transmission rate**”, recited in **abstract, lines 8-10**), regarding claim 7, a rate controller (“**means for determining bandwidth capacity**” recited in **column 3, line 1-7**), wherein the determining means (“**means for adjusting the sender rate**”, recited in **column 3, line 7-10**) determines a first rate (“**first rate**” recited in **column 3, lines 10-12**) to be requested if the difference between the indication of the amount of congestion and the selected value falls within a predetermined range (“**bandwidth capacity**”, recited in **column 3, lines 5-8**) and a second different rate (“**second rate and predetermined range**” recited in **column 3, line 12-16**) to be requested if the difference between the indication of the amount of congestion and the value falls outside the predetermined range (“**traffic on network exceeds network capacity**” recited in **column 4, line 9-13**), regarding claim 10, a rate controller for controlling the rate of data transmission from a source to a user via a communications link, the rate controller (“**determining bandwidth capacity**” recited in **column 2, lines 50-56**) including processing means (“**congestion control**”, recited in **column 2, lines 65-67**) for generating a signal (“**feedback information**”, recited in **column 4, lines 2-7**) representing a rate request

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(**"sender's rate"**, recited in **column 2, lines 8-10**) which will be used in determining the rate at which (**"source to destination"**, recited in **column 3, lines 1-3**) data will be transmitted from the source to the user, **regarding claim 12**, a rate controller (**"means for determining bandwidth capacity"** recited in **column 3, line 1-7**), wherein the determining means (**"means for adjusting the sender rate"**, recited in **column 3, line 7-10**) determines a first rate (**"first rate"** recited in **column 3, lines 10-12**) to be requested if the difference between the indication of the amount of congestion and the selected value falls within a predetermined range (**"bandwidth capacity"**, recited in **column 3, lines 5-8**), and a second different data rate (**"second rate and predetermined range"** recited in **column 3, line 12-16**) to be requested if the difference between the indication of the amount of congestion and the value falls outside the predetermined range (**"traffic on network exceeds network capacity"** recited in **column 4, line 9-13**), **regarding claim 16**, a method (**"determining bandwidth capacity"** recited in **column 3, lines 1-4**) for controlling the rate of data transmission from a source of data to a user via a communications link (**Fig. 1, "communication link 10"**, recited in **column 3, lines 55-59**), wherein processing means are provided to generate a signal (**"feedback information"**, recited in **column 4, lines 2-7**) representing a rate request (**"sender rate"**, recited in **column 2, lines 8-10**) which will be used in determining the rate at which data will be transmitted from the source to the user, the processing means generating the signal by carrying out the steps of: determining the rate (**Fig.3, congestion Feedback controller-"rate adjustment with depending on congestion"** recited in **column 2 line 50-56**), to be

requested on the basis of the ratio of the value to the indication of the amount of congestion on the communications link (**Fig. 1, "communication link 10"**, recited in **column 3, lines 55-59**, regarding **claim 18**, determining means ("**adjustment of sender rate**" recited in **abstract, lines, 1-8**) for determining the rate to be requested as on the basis of the indication of the amount of congestion on the communications link (**Fig. 1, "communication link 10**, recited in **column 3, lines 55-59**), the processing means ("**congestion controller**" recited in **column 4, lines 20-25**) further including means (**Fig. 2, "congestion Feedback from source 18, to destination 22"** recited in **column 2-3, lines 65-70**) for communicating the signal to the source, wherein the rate ("**transmission packet rates**" recited in **column 4, lines 2-7**) of the data transmission from the source to the user is controlled on the basis of the signal (**Fig. 2, congestion feedback arrow**"), regarding **claim 20**, program storage device (**Fig. 3, packet buffer 34**, recited in **column 4, lines 16-20**), determining the rate ("**adjusting sender rate according to congestion detected**", recited in **column 2, lines 49-56**) to be requested as function of the indication of the amount of congestion, the processing means thereafter communicating the signal and the rate of the data transmission from the source to the user then being controlled on the basis of the signal (**Fig. 2, "congestion Feedback arrow"** recited in **column 4, lines 3-6**) according the method of **claim 1**. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the adaptive cost of service for communication network based on the level of network congestion of Litwin et al. by using the method for supporting non-linear, high scalable increase-decrease congestion control scheme as taught by

Loguinov et al. in order to provide to provide..... (See Loguinov, column 4, lines 39-48 for motivation).

5. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Litwin et al. in view of Loguinov et al. as applied to claim 1 above, and further view of Arai et al (US 2002/0002470 A1).

Litwin et al. and Loguinov et al. disclose all the claim limitations above, are silent with regard to a method, wherein the variable parameter assumes discrete values. However, Arai et al. in a similar field of endeavor discloses a method, wherein the variable parameter ("**charging rate variations**", recited in **paragraph 0052, lines 8-17**) assumes discrete values ("**yen per minutes or yen per bytes**", recited in **paragraph 0052, lines 9 and 14**). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and systems of Litwin et al. with Loguinov et al. by using the features as taught by Arai et al, in order to provide..... (See Arai, paragraph 0011, lines 1-14 for motivation)

9. **Claims 9 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Litwin et al. in view of Loguinov et al. as applied to claim 5 and 10 above, and further in view of Kirkby et al. (US 6,671,285 B1).

**Litwin et al. and Loguinov et al.** disclose all the all the claim limitations above with the exception of a method wherein the step of providing an indication of amount of congestion includes determining a marking rate m of incoming data transmitted on the

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communications link and wherein the congestion charge is determined from the marking rate as recited in **claim 9**, a rate controller, wherein the means for obtaining an indication of the amount of congestion comprises metering means for determining a marking rate of incoming data transmitted on the communications link as recited in **claim 14**. However, **Kirkby et al.** teaches a method wherein the step of providing an indication of amount of congestion includes determining a marking rate *m* ("**means to control transmission bandwidth**" recited in **column 2-3, line 65-70**) of incoming data transmitted on the communications link and wherein the congestion charge is determined from the marking rate ("**charging rate dependent on bandwidth utilization**" recited in **column 2 line, 6-12**) as recited in **claim 9**, a rate controller ("**control means to control bandwidth**" recited in **column 2-3, line 67-70**), wherein the means for obtaining an indication of the amount of congestion comprises metering means ("**charging rate based on bandwidth utilization**" recited in **column 3, line 41-49**) for determining a marking rate of incoming data transmitted on the communications link as recited in **claim 14**. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the adaptive cost of service for communication network based on level of network congestion with of Litwin et al. with Loguinov et al by using features as taught by **Kirkby et al.** in order to provide..... (See Kirkby, column 5, lines 5-30)

***Allowable Subject Matter***

10. **Claims 13,15, 17, and 19** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kamiya et al (US 5,974, 033), Shaffer et al (US 5,898,668), Mukai et al (US 7,209,443 B2), and Wilson et al (US 2001/0032269 A1) are cited to show methods and systems that are relevant to claimed invention.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Candal Elpenord whose telephone number is (571) 270-3123. The examiner can normally be reached on Monday through Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CE

KWANG BIN YAO  
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Kwang Bin Yao', is written over the printed name and title.